

**ABSTRACT**

**METHOD AND APPARATUS  
FOR  
CONVEYING BIDIRECTIONAL DATA,  
POWER AND TIMING SIGNALS  
USING A SINGLE TRANSFORMER**

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Transformer driven by data modulated signal provides isolated power. Outbound data is  
extracted from the data modulated signal received from the transformer. Inbound data  
received in isolated circuitry modulates the load presented to transformer. Inbound data  
perceived in non-isolated circuitry by sensing load experienced by the transformer.